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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/672,814 | 09/29/2000 | Lin Lin | 91436-256 | 2246 |

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| EXAMINER |
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| STORM, DONALD L |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2654 | 16 |

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

<table>
<tr><td rowspan="2" colspan="2"><b>Office Action Summary</b></td><td><b>Application No.</b></td><td><b>Applicant(s)</b></td></tr>
<tr><td>09/672,814</td><td>LIN ET AL.</td></tr>
<tr><td colspan="2"></td><td><b>Examiner</b></td><td><b>Art Unit</b></td><td></td></tr>
<tr><td colspan="2"></td><td>Donald L. Storm</td><td>2654</td><td></td></tr>
</table>

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _26 September 2003_.

2a)☐ This action is **FINAL**.       2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-21_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _3 and 6-9_ is/are allowed.

6)☒ Claim(s) _1,2,4,5 and 10-21_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 11-03)                      Office Action Summary                    Part of Paper No.

## DETAILED ACTION

1.     The text of those sections of Title 35, U.S. Code not included in this action can be found in

a prior Office action.

### *Claim Rejections - 35 USC § 102*

2.     The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in
> the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

### *Gould*

3.     Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Gould et al.

[US Patent 5,920,837], already of record.

4.     Regarding claim 1, Gould [at column 86, lines 30-50] describes a parallel SI and SD

embodiment recognizable as a whole to one versed in the art by explicitly describing the following

elements:

a speech recognition system [at column 10, lines 20-21, as apparatus for performing speech

recognition];

computer memory storing SI models, storing SD models, and storing a program portion to

identify by attempting matching a signal with models [at column 11, lines 2-24, as hard disk and

RAM with base vocabulary program, user's word model files, and instructions used by the

recognizer];

a (first) set of word models including models for words [at column 5 lines 31-32, as first

set of phonetic word models];

they are SI models [at column 22, lines 5-15, as models in a selected base vocabulary that

reflects the speech of populations of speakers];

the word is in an utterance of a user [at column 12, lines 1-13, as an input utterance word

dictated by the user which leads to steps 223, 220, and 222];

a second set of word models [at column 5, lines 32-34, as second set of custom word

models];

they are SD models [at column 13, lines 38-48, as models kept for a user];

they are derived from speech of a particular user [at column 44, lines 58-67, as models in

the user's file are customized to the user's own pronunciations];

the second (SD) set includes models for at least some of said words (having word models

included in the first SI set) [at column 5, lines 42-45, as each word model set defines a word

model for each of a common set of vocabulary words];

the SI models are used to match a word with a SI word model and the SD models are used

to match a word [at column 5, lines 45-48, as match a word signal against word models for a given

vocabulary word from each of the word model sets];

the word is in an utterance from a user [at column 12, lines 1-13, as an input utterance

word dictated by the user which leads to steps 223, 220, and 222];

for the SD models, the utterance is by a particular user [at column 44, lines 58-67, as

models in the user's file are customized to the user's own pronunciations];

match portions of an audio signal with word models among the first (SI) set [see Fig. 55

for the Recognize routine and its description especially at columns 39-42 of scoring frames of the

utterance against prefilter models and word models defined by phonetic spellings in the .VOC file];

match portions of an audio signal with word models among the second (SD) set [see Fig. 55 for the Recognize routine and its description especially at columns 39-42 of scoring frames of the utterance against prefilter models and word models of helper model type stored in the .USR file];

those words are identified in the utterance of a user [at column 12, lines 1-13, as an input utterance word dictated by the user which leads to steps 223, 220, and 222];

for the SD models, the utterance is by a particular user [at column 44, lines 58-67, as models in the user's file are customized to the user's own pronunciations];

user-selected words include words for invoking commands [see Figs. 62, Fig. 72, and their descriptions especially at columns 55-56 of user-desired vocabulary words entered for commands to execute if recognized];

those words are identified in the utterance [see Fig. 54, items 1102, 1200, 1212 and its description especially at columns 67-68 of the recognized keystroke or script returned for the current utterance];

for the SD models, the utterance is by a particular user [at column 85, lines 12-25, as the models created in the embodiment that uses helper models].

5.      Regarding claim 2, <u>Gould</u> [at Fig. 5] describes a method of operating speech recognizer recognizable as a whole to one versed in the art by explicitly describing the following elements:

a (first) set of word models including models for words [at column 5 lines 31-32, as first set of phonetic word models];

the word is in an utterance of a user [at column 12, lines 1-13, as an input utterance word

dictated by the user which leads to steps 223, 220, and 222];

they are SI models [at column 22, lines 5-15, as models in a selected base vocabulary that

reflects the speech of populations of speakers ];

storing the SI models [at column 11, lines 2-24, as loading RAM with base vocabulary

program];

a second set of word models [at column 5, lines 32-34, as second set of custom word

models];

they are derived from speech of a particular user [at column 44, lines 58-67, as models in

the user's file are customized to the user's own pronunciations];

this set includes models for at least some of said words (having word models included in

the first SI set) [at column 5, lines 42-45, as each word model set defines a word model for each of

a common set of vocabulary words];

they are SD models [at column 13, lines 38-48, as models kept for a user];

storing the SD models[at column 11, lines 2-24, as loading RAM with user's word model

files];

a model chosen by the user chosen by the user to initiate performance of a command [see

Fig. 62, Fig. 72, and their descriptions especially at columns 55-56 of user-desired vocabulary

words entered for commands to execute if recognized];

the command is a system command [see Fig. 62, Fig. 63, and their descriptions especially

at columns 55-56 of user-desired vocabulary words entered in the System/Global

Vocabulary/Group];

the model chosen is an SD model [at column 85, lines 12-25, as the models created in the embodiment that uses helper models];

the user is the particular user for the SD model [at column 44, lines 58-67, as the user's own pronunciations are customized models in the user's file];

match portions of an audio signal with word models among the first (SI) set [see Fig. 55 for the Recognize routine and its description especially at columns 39-42 of scoring frames of the utterance against prefilter models and word models defined by phonetic spellings in the .VOC file];

match portions of an audio signal with word models among the second (SD) set [see Fig. 55 for the Recognize routine and its description especially at columns 39-42 of scoring frames of the utterance against prefilter models and word models of helper model type stored in the .USR file];

those words are recognized in the utterance of a user [at column 12, lines 1-13, as an input utterance word dictated by the user which leads to steps 223, 220, and 222];

for the SD models, the utterance is by a particular user [at column 44, lines 58-67, as models in the user's file are customized to the user's own pronunciations];

performing a command in response to that recognized word [see Fig. 54, items 1102, 1200, 1212 and its description especially at columns 67-68 of performing steps of the recognized keystroke or script returned for the current utterance];

a system command is performed [see Fig. 76, items 1768-1788 and its description especially at columns 73-75 of pronounceable commands for system and control menus].

6.      Regarding claim 4, <u>Gould</u> describes the additional claim elements using the same rationale

as in the prior Office action (paper 7).

*<u>Vysotsky</u>*

7.      Claims 10, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by

<u>Vysotsky</u> et al [U. S. Patent 5,719,921] using the same rationale as in the prior Office action

(paper 7) with reference to the earlier Office action (paper 4).

## *Claim Rejections - 35 USC § 103*

*<u>Vysotsky and Salazar</u>*

8.      Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Vysotsky</u> et al [U.

S. Patent 5,719,921] in view of <u>Salazar</u> et al. [US Patent 5,774,841] using the same rationale as in

the prior Office action (paper 7).

*<u>Vysotsky and Firman</u>*

9.      Claims 11 and 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

<u>Vysotsky</u> et al [U. S. Patent 5,719,921] in view of <u>Firman</u> [US Patent 5,377,303] using the same

rationale as in the prior Office action (paper 7) with reference to the earlier Office action (paper 4).

## *Allowable Subject Matter*

10.     Claims 3 and 6-9 are allowed.

### *Response to Arguments*

11.     The prior Office action, mailed April 21, 2003 (paper 7), objects to the specification and claims, and rejects claims under the judicially created doctrine of obviousness-type double patenting, under *35 USC § 102* and *§ 103*. The Applicant's arguments and changes in AMENDMENT AND RESPONSE TO FINAL OFFICE ACTION filed June 23, 2003 (paper 8) have been fully considered with the following results.

12.     With respect to objection to the specification's out-of-date reference to related applications, the changes entered by amendment provide a sufficient citation. Accordingly, the objection is removed.

13.     With respect to objection to those claims needing clarification, the changes entered by amendment provide clear descriptions of the claimed subject matter. Accordingly, the objections are removed.

14.     With respect to rejection of claims 1 and 2 under *35 USC § 102* and *§ 103*, citing <u>Gould</u>, the Applicant's arguments appear to be as follows:

        The Applicant's argument appears to be that claimed features are not found in <u>Gould</u>. This argument is not persuasive because <u>Gould</u> describes this subject matter using the terminology at the passages that are specifically cited elsewhere in this Office action.

        The Applicant's arguments have been fully considered but they are not persuasive. Accordingly, the rejections are maintained.

15.    With respect to rejection of claim 6 under *35 USC § 102*, citing <u>Gould</u>, the changes entered

by amendment include a command associated with both a UI and a UD word model.

The reference <u>Gould</u> does not explicitly describe that limitation. In the reference <u>Gould</u>,

UI commands are built unless an acoustic model cannot be built. On not finding a UI acoustic

model for the user-chosen command word, a UD models is trained. Accordingly, the rejection is

removed. The Applicant's assertions with respect to <u>Gould</u> have been considered, but they are

moot in view of the new claim element.


16.    With respect to rejection of claims 10 and 13 under *35 USC § 102*, citing <u>Vysotsky</u>, the

Applicant's arguments appear to be as follows:

The Applicant's argument appears to be that <u>Vysotsky</u> does not provide a user-chosen

utterance to initiate a command . This argument is not persuasive because <u>Vysotsky</u> describes this

subject matter using the terminology shown in the prior Office action in which specific citations to

the terminology and passages in the references were detailed. This argument fails to comply with

37 CFR 1.111(b) because it amounts to a general allegation that the claims define a patentable

invention without specifically pointing out how the language of the claims patentably

distinguishes them from the references. The cited passages that were particularly pointed out in

the rejections of the prior Office action should be argued.

The Applicant's arguments have been fully considered but they are not persuasive.

Accordingly, the rejections are maintained.

17.     With respect to rejection of claim 3 under *35 USC § 103*, citing <u>Vysotsky</u> and <u>Das</u>, the

changes entered by amendment include a command associated with both a stored word model and

with a default word model.

The references <u>Vysotsky</u> and <u>Das</u> do not explicitly describe that limitation nor make such a

limitation obvious.  In the references <u>Vysotsky</u> and <u>Das</u>, the stored word models are associated

with different commands from default commands.  Accordingly, the rejection is removed.  The

Applicant's assertions with respect to <u>Vysotsky</u> and <u>Das</u> have been considered, but they are moot

in view of the new claim element.


18.     With respect to rejection of claim 5 under *35 USC § 103*, citing <u>Vysotsky</u> and <u>Salazar</u>, the

Applicant's arguments appear to be as follows:

a.      The Applicant's argument appears to be that <u>Vysotsky</u> does not use likelihood of

recognition with SI models for deriving SD models.  This is similar to the Examiner's presentation

(paper 7) of how <u>Vysotsky</u> does not anticipate claim 5.  However, this argument is not persuasive

*35 USC § 103* under because a previous Office action (paper 7) locates or suggests every element

of the claims in either <u>Vysotsky</u> or <u>Salazar</u> and suggests the desirability of making the

combination as a whole.

b.      The Applicant's argument appears to be that <u>Salazar</u> does not use recognition with

SI models to derive an SD model because <u>Salazar</u> is merely updating a set of SD models.  These

arguments are not persuasive because one cannot show nonobviousness by attacking references

individually where the rejections are based on combinations of references.  A previous Office

action (paper 7) locates or suggests every element of the claims in either <u>Vysotsky</u> or <u>Salazar</u> and

suggests the desirability of making the combination as a whole.  Furthermore, <u>Salazar</u> creates a

second set of word models in RAM and keeps the first set, rather than maintaining one set of models; see paper 7.

c.       The Applicant's argument appears to be that the Examiner assembled a teaching of storing a second set of SD word models out of unrelated pieces of Salazar. In particular, column 13, line 65, describes input, not word models. This argument is not persuasive because Salazar is describing the system with reference to Figures 3A and 3B in Salazar's chosen order at least from column 13 to column 15. The only citation by the Examiner that is out of order is the citation to column 11, where speech appears explicitly. In column 13, at lines 60-65 discussing Figs. 3A and 3B, Salazar uses the terminology "audio" for the signal to be recognized. In particular, column 13, lines 60-65, recite both the input (audio signal) and the first set of word models (the active vocabulary). As indicated in paper 7, this vocabulary is a different set from the set formed in RAM.

The Applicant's arguments have been fully considered but they are not persuasive. Accordingly, the rejection is maintained.

19.      With respect to rejection of claim 7 under *35 USC § 103*, citing Vysotsky and Das, the changes entered by amendment include a UI model of a word and a UD model of a different word both associated with a command.

The references Vysotsky and Das do not explicitly describe that limitation nor make such a limitation obvious. In the references Vysotsky and Das, the stored word models are associated with different commands. Accordingly, the rejection is removed. The Applicant's assertions with respect to Vysotsky and Das have been considered, but they are moot in view of the new claim element.

20.     With respect to rejection of claim 18 under *35 USC § 103*, citing <u>Vysotsky</u> and <u>Firman</u>, the

Applicant's arguments appear to be as follows:

The Applicant's argument appears to be that <u>Vysotsky</u> and <u>Firman</u> do not provide a UD model of

a user-chosen utterance for a system command and a UI model for system commands. This

argument is not persuasive because <u>Vysotsky</u> and <u>Firman</u> describe this subject matter using the

terminology shown in an earlier Office action in which specific citations to the terminology and

passages in the references were detailed. This argument fails to comply with 37 CFR 1.111(b)

because it amounts to a general allegation that the claims define a patentable invention without

specifically pointing out how the language of the claims patentably distinguishes them from the

references. The cited passages that were particularly pointed out in the rejections of the prior

Office action should be argued.

The Applicant's arguments have been fully considered but they are not persuasive.

Accordingly, the rejections are maintained.


21.     With respect to rejection of claim 3 under the judicially created doctrine of obviousness-

type double patenting, the changes entered by amendment include a command associated with

both a stored word model and with a default word model.

US Patent 6,487,530 does not claim that limitation nor make such a limitation obvious.

Accordingly, the rejection is removed. The Applicant's assertions have been considered, but they

are moot in view of the new claim element.

22.     With respect to rejection of claim 7 under the judicially created doctrine of obviousness-

type double patenting, the changes entered by amendment include a UI model of a word and a UD

model of a different word both associated with a command.

US Patent 6,487,530 does not claim that limitation nor make such a limitation obvious.

Accordingly, the rejection is removed. The Applicant's assertions have been considered, but they

are moot in view of the new claim element.

### *Conclusion*

23.     Any response to this action should be mailed to:

> Commissioner for Patents
> P.O. Box 1450
> Alexandria, VA 22313-1450

**or faxed to:**

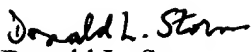> (703) 872-9306, (for formal communications intended for entry)

**Or:**

> (703) 872-9306, (for informal or draft communications, and please label
> "PROPOSED" or "DRAFT")

> Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
> Arlington, VA (Sixth Floor, Receptionist)

24.     Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Donald L. Storm, of Art Unit 2654, whose telephone number is

(703)305-3941. The examiner can normally be reached on weekdays between 8:00 AM and 4:30

PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Richemond Dorvil can be reached on (703)305-9645. Any inquiry of a

. general nature or relating to the status of this application or proceeding should be directed to the

receptionist whose telephone number is (703)305-4750.

Donald L. Storm
Patent Examiner
Art Unit 2654

December 4, 2003